

New York State Department of Transportation

Yellow Flag NB22CTW004

By: Rehan Afridi

Flag Date: March 17, 2022

Superseding Information:

This flag supersedes: YF NB2158W012

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: March 17, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Rehan Afridi, P.E. 075185

Date: April 04, 2022

Reviewed By: Robert Kemp

Date: April 04, 2022

Attachments: 6

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 125			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

This Yellow Flag NB22CTW004 supersedes previously issued Yellow Flag No. NB2158W012.

Location: Span 125 Girder G9 at Pier 124

Description: The end of Girder G9 in Span 125 at Pier 124 exhibits severe corrosion resulting in an overall web bearing area section loss of approximately 39% (previously 40%) and an overall shear web area section loss of approximately 15% (previously 14%) with an average overall localized section loss of approximately 55% (previously 56%) for 5"L x 4"H area directly above the bearing below the guide angle (Photos 3 and 4). Also, the lower web of the girder adjacent to the web bearing area exhibits 20% average section loss for 3'L x 3"H above the bottom flange. There is no significant change since the last inspection. (Refer to sketch for more details)

This girder is located above an expansion bearing.

Notes:

- 1.The adjacent Girder G8 is in good condition with previously installed steel reinforcement plates/angles at the end of the girder, which are in good condition.
- 2.The adjacent Girder G10 exhibits up to 35% section loss at the lower web above the bottom flange and up to 25% section loss for the full height of the web adjacent to the guide angles. The condition is the same as reported in the last inspection.
- 3.The flagged condition was accessed using a 30ft bucket truck within the parking lot area.

Flag Photographs

Photo Number: 1

Photo Filename: YF NB22CTW004 Photo 1-RA-602-0132.jpg



Attachment Description: General view of Girders G7 thru G10 in Span 125 at Pier 124. Looking Begin.

Photo Number: 2

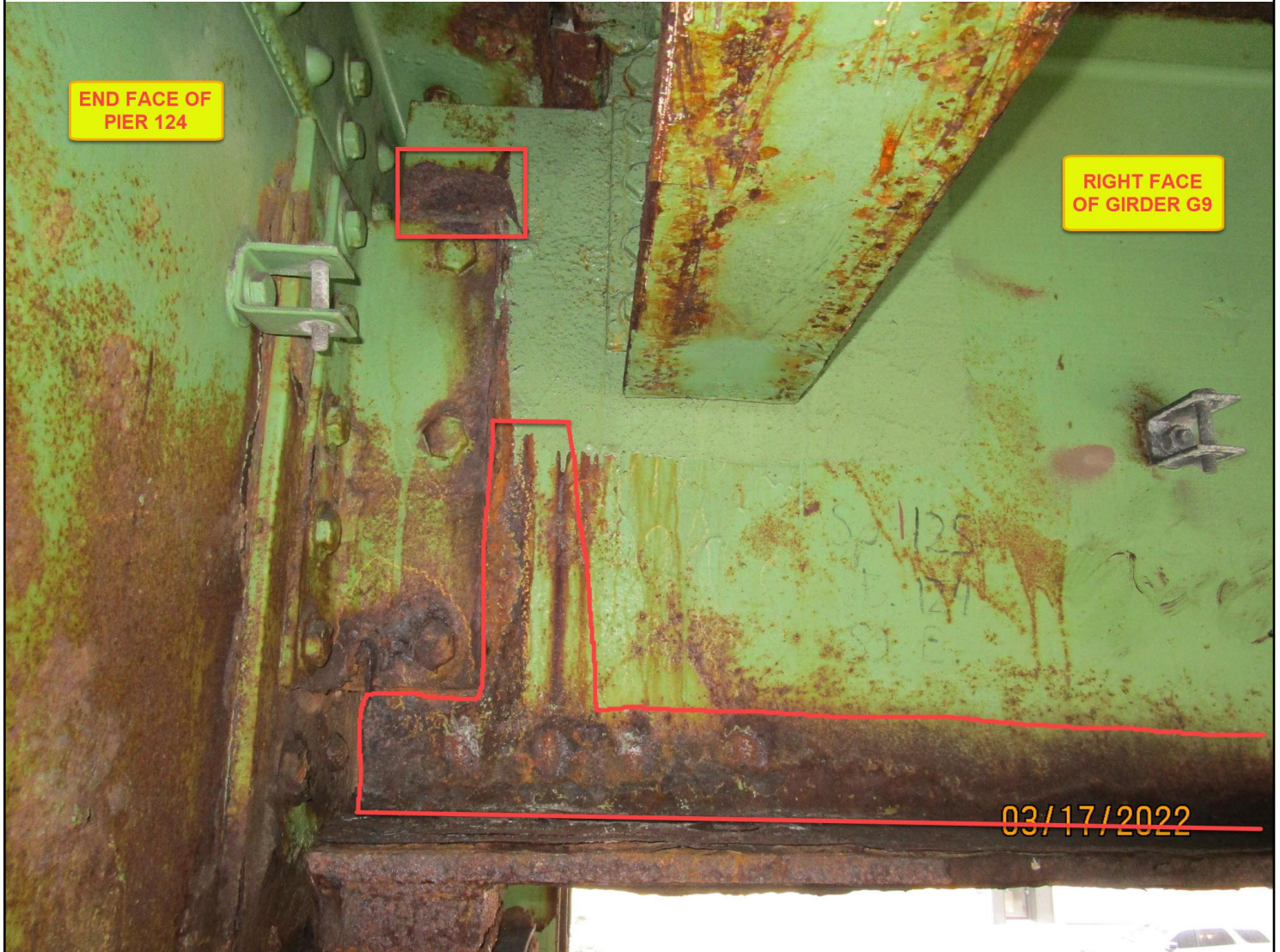
Photo Filename: Photo 2-RA_602-0135.JPG



Attachment Description: General view of the flagged condition at Girder G9 in Span 125 at Pier 124. Looking Begin.

Photo Number: 3

Photo Filename: Photo 3-RA_602-0137.JPG



Attachment Description: The right face of Girder G9 in Span 125 at Pier 124. The end of the girder exhibits severe section loss at the lower web above the bottom flange and web height adjacent to the guide angle. Looking Left.

Photo Number: 4

Photo Filename: Photo 4-RA_602-0143.JPG



Attachment Description: The left face of Girder G9 in Span 125 at Pier 124. The end of the girder exhibits severe section loss at the lower web above the bottom flange and web height adjacent to the guide angle. Looking Right.

Photo Number: **5**

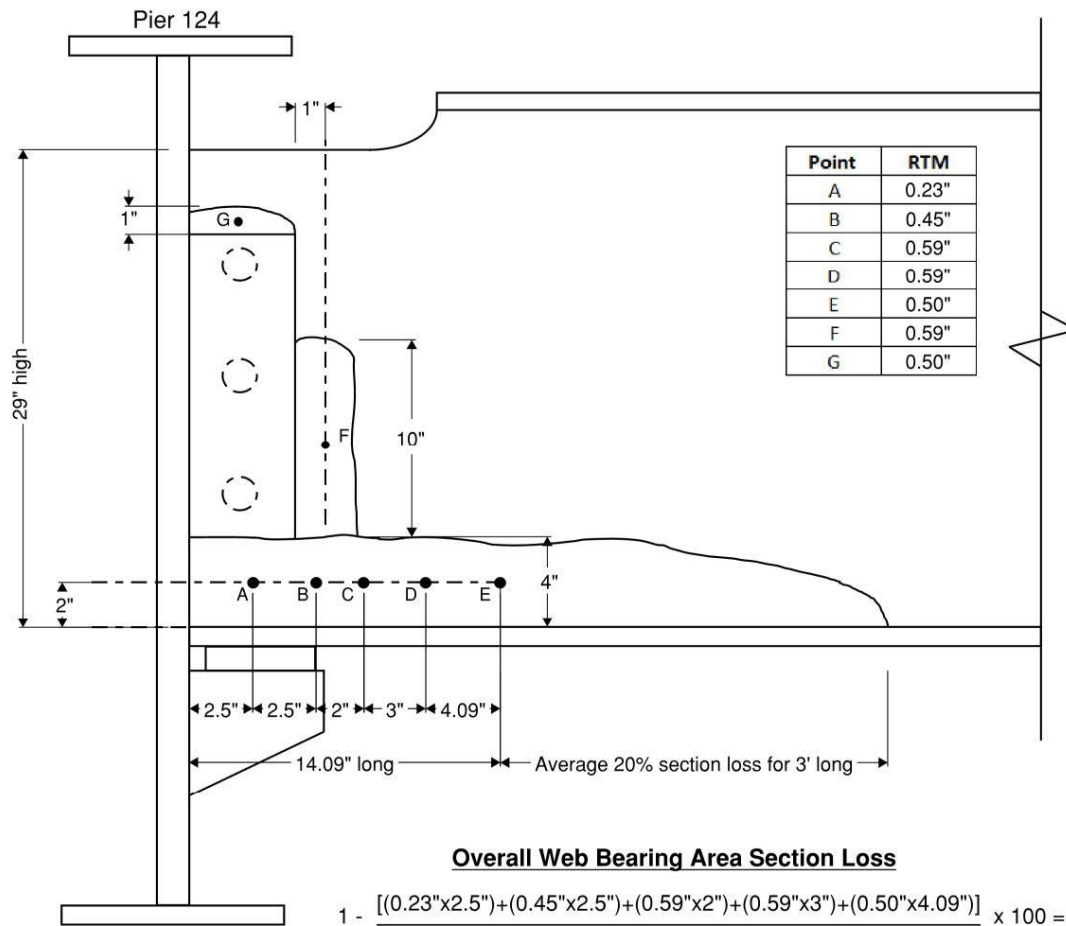
Photo Filename: **22YF_Span 125_G9 Sketch.jpg**

Right Face of Girder G9 Sketch in Span 125 at Pier 124

N.T.S.

DATE 03/17/2022

TEAM LEADER Rehan Afridi, P.E. **ASSISTANT TEAM LEADER** Marcos Perez



Overall Web Bearing Area Section Loss

$$1 - \frac{[(0.23 \times 2.5) + (0.45 \times 2.5) + (0.59 \times 2) + (0.59 \times 3) + (0.50 \times 4.09)]}{11.03 \text{ in}^2} \times 100 = 39\%$$

Overall Shear Web Area Section Loss

$$1 - \frac{[(0.45" \times 4") + (0.59" \times 10") + (0.50" \times 1") + (0.783" \times 14")]}{22.71 \text{ in}^2} \times 100 = 15\%$$

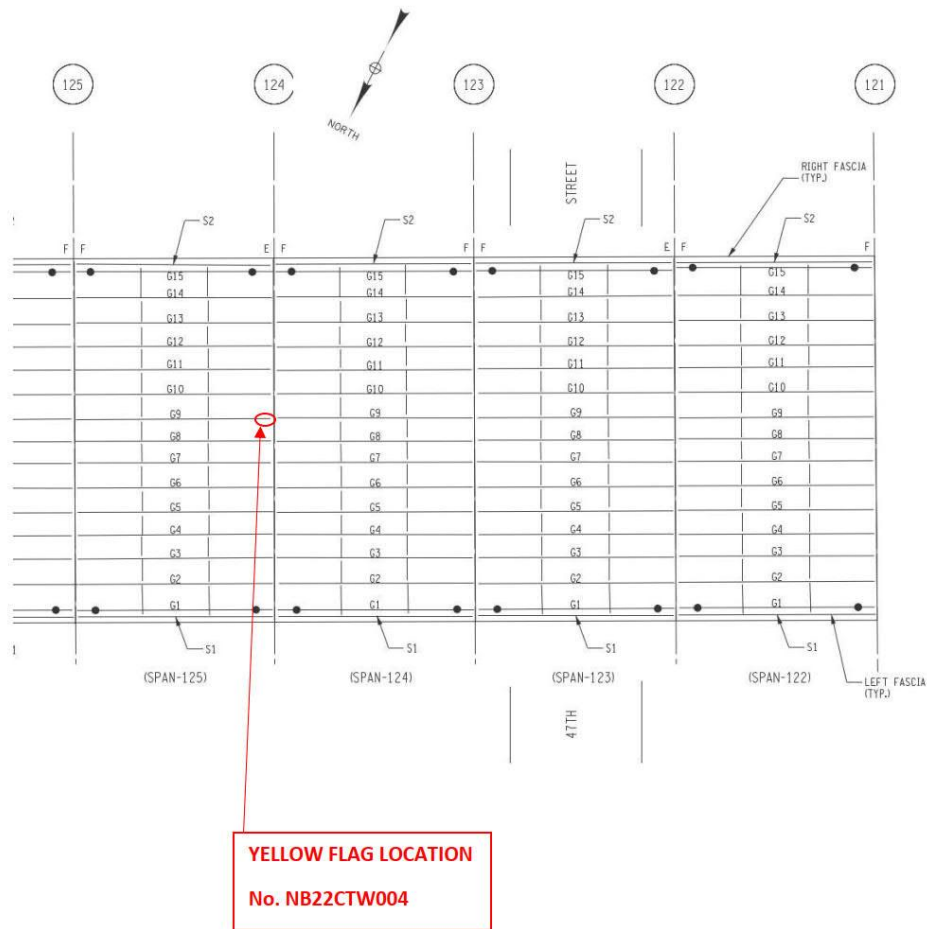
Notes:

- As-built web thickness = $0.783"$
- Length of bearing area = $18 \times \text{web thickness} = 18 \times 0.783" = 14.09"$
- Overall bearing area = $14.09" \times 0.783" = 11.03 \text{ in}^2$
- As-built shearing web area = $29" \times 0.783" = 22.71 \text{ in}^2$
- Adjacent Girder G8 has previously installed reinforcement steel plates and angles at the end of girder
- Adjacent Girder G10 exhibits up to 35% section loss at the lower web above the bottom flange and up to 25% section loss for the full height of the web adjacent to the guide angles.

Attachment Description: Span 125 G9 at Pier 124 Sketch

Photo Number: 6

Photo Filename: YF NB22CTW004 Framing Plan.jpg



Attachment Description: Span 125 G9 at Pier 124 Framing Plan